WHAT IS CLAIMED

1. For use with a data communication network having a first transceiver at a host site that communicates over a communication channel with a second transceiver at remote site, said remote having a plurality of network element devices coupled with said second transceiver, a method of enabling a network management device coupled with said host site to conduct management communications with any of said plurality of network element devices at said remote site, said method comprising the steps of:

(a) providing a single destination address-based management communication protocol that supports identification and routing of management messages to only a single destination address, and having a command message structure that includes an intentionally unused information field;

(b) assembling a management message, that is to be coupled to said first transceiver for transmission over said communication channel to said remote site, in accordance with said management communication protocol provided in step (a), and containing a target address identifier field that specifies a selected one of said plurality of network element devices;

(c) modifying the management message assembled in step (a), so as to derive a reformatted management message in which said target address identifier field specifies said second transceiver, and said

intentionally unused information field contains information identifying said selected one of said plurality of network element devices at said remote site;

(d) coupling said reformatted management message derived in step (c) to said first transceiver, for transmission over said communication channel to said second transceiver at said remote site; and

(e) receiving said reformatted management message at said second transceiver at said remote site and forwarding said reformatted management message therefrom to said selected one of said plurality of network element devices at said remote site.

2. The method according to claim 1, wherein step (e) comprises examining said reformatted management message for the presence of information in said intentionally unused information field and, in response to detecting information in said intentionally unused information field, changing the contents of said target address identifier field of said reformatted message in accordance with said information in said intentionally unused information field, so as to produce a further reformatted message, and forwarding said further reformatted message to a network element device whose address is contained in the target address identifier field of said further reformatted message.

3. The method according to claim 1, wherein said management communication protocol corresponds to Transaction Language 1 (TL1) protocol, and said intentionally unused information field corresponds to a <GENERAL BLOCK> field of the command structure thereof.

4. The method according to claim 1, wherein said first transceiver comprises an add-drop multiplexer that is operative to transmit messages over said communication channel to only said first transceiver as a valid single destination address, using said single destination address-based management communication protocol.

5. For use with a data communication network having a first transceiver at a host site that is operative to communicate over a communication channel with only a second transceiver at remote site, by using a single destination address-based management communication protocol that supports identification and routing of management messages to only a single destination address, said protocol having a command message structure that includes a target identification field that specifies a single destination address, and an intentionally empty field, a method of enabling a network management device coupled with said host site to conduct management communications with any of a plurality of network element devices at said remote site other than said second transceiver, said method

comprising the steps of:

(a) examining the target identifier field of a management message provided from a host device for transmission by said first transceiver over said communication channel, to determine whether said target identifier field identifies the address of one of said plurality of network element devices at said remote site;

(b) in response to the target identifier field examined in step (a) identifying the address of one of said plurality of network element devices at said remote site, reformatting said management message, modifying said management message, so as to derive a reformatted management message in which said target address identifier field specifies said second transceiver, and said intentionally unused information field contains information identifying said selected one of said plurality of network element devices at said remote site;

(c) coupling said reformatted management message derived in step (b) to said first transceiver, for transmission thereby over said communication channel to said second transceiver at said remote site; and

(d) receiving said reformatted management message at said second transceiver at said remote site, and forwarding said reformatted management message therefrom to said selected one of said plurality of network element devices at said remote site, as identified in said unused information field.

6. The method according to claim 5, wherein step (d) comprises examining said reformatted management message for the presence of information in said intentionally unused information field and, in response to detecting information in said intentionally unused information field, changing the contents of said target address identifier field of said reformatted message in accordance with said information in said intentionally unused information field, so as to produce a further reformatted message, and forwarding said further reformatted message to a network element device whose address is contained in the target address identifier field of said further reformatted message.

7. The method according to claim 5, wherein said management communication protocol corresponds to Transaction Language 1 (TL1) protocol, and said intentionally unused information field corresponds to a <GENERAL BLOCK> field of the command structure thereof.

8. The method according to claim 5, wherein said first transceiver comprises an add-drop multiplexer that is operative to transmit messages over said communication channel to only said first transceiver as a valid single destination address, using said single destination address-based management communication protocol.

9. An arrangement for enabling a network management device to conduct management communications with any of a plurality of network element devices at a remote site, by way of a first transceiver at said host site that is operative to communicate over a communication channel with a second transceiver at said remote site, said second transceiver being coupled to said plurality of network element devices, said network management device being operative to assemble a management communication message, in accordance with a single destination address-based management communication protocol that supports identification and routing of management messages to only a single destination address, said protocol having a command message structure having a target identification field that specifies a single destination address, and an intentionally empty field, said arrangement comprising:

a management communication message processor coupled to receive said management communication message as assembled by said network management device and being operative, in response to said management communication message having a target identifier field that identifies the address of one of said plurality of network element devices at said remote site, to modify said management message, so as to derive a reformatted management message, in which said target address identifier field specifies said second transceiver, and said intentionally unused information field contains information that identifies said selected one of said

plurality of network element devices at said remote site;

said first transceiver being operative to transmit said reformatted management message over said communication channel to said second transceiver at said remote site as identified by said target address identifier field of said reformatted message; and

said second transceiver at said remote site being operative to receive said reformatted management message, and to forward said reformatted management message to said selected one of said plurality of network element devices at said remote site, as identified in said unused information field.

10. The arrangement according to claim 9, wherein said second transceiver is operative to examine said reformatted management message for the presence of information in said intentionally unused information field and, in response to detecting information in said intentionally unused information field, to change the contents of said target address identifier field of said reformatted message in accordance with said information in said intentionally unused information field, so as to produce a further reformatted message, and forward said further reformatted message to a network element device whose address is contained in the target address identifier field of said further reformatted message.

11. The arrangement according to claim 9, wherein said management communication protocol corresponds to Transaction Language 1 (TL1) protocol, and said intentionally unused information field corresponds to a <GENERAL BLOCK> field of the command structure thereof.

12. The arrangement according to claim 9, wherein said first transceiver comprises an add-drop multiplexer that is operative to transmit messages over said communication channel to only said first transceiver as a valid single destination address, using said single destination address-based management communication protocol.